



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/558,393	04/25/2000	Stephen P. Scheinberg	AD6552USNA1	9134

30743 7590 02/05/2003

WHITHAM, CURTIS & CHRISTOFFERSON, P.C.  
11491 SUNSET HILLS ROAD  
SUITE 340  
RESTON, VA 20190

EXAMINER

HALPERN, MARK

ART UNIT	PAPER NUMBER
----------	--------------

1731

DATE MAILED: 02/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/558,393

Applicant(s)

SCHEINBERG, STEPHEN P.

Examiner

Mark Halpern

Art Unit

1731

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 January 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 36,37,39-45 is/are pending in the application.
- 4a) Of the above claim(s) 43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36,37,39-42,44 and 45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

- 1) Acknowledgement is made of Amendment received 10/29/2002, Paper No. 11.  
Applicant amends claims 36, 37 and 40.

### ***Election/Restrictions***

- 2) Applicant's election with traverse of species of carbon, in Paper No. 14, is acknowledged. The traversal is on the ground(s) that a variety of fibers can be used as the reinforcement fibers that can be constructed into a mat. This is not found persuasive because, as the applicant points out, there is a wide variety of species of fiber, the applicant recited 13 species of fibers, which are distinct species to be searched and considered.

The requirement is still deemed proper and is therefore made FINAL.

- 3) Acknowledgement is made of Response to Restriction, Paper No. 14, wherein Applicant further amends claims 36, 37 and 40, to recite the species of carbon fiber, as opposed to the species of polyacrylonitrile or pitched based carbon.
- 4) Claim 43 is removed from consideration by the examiner, since it recites the nonelected species of fibers of glass.

### ***Claim Objections***

- 5) Claims 44-45, are objected to because of the following informalities: claims

Art Unit: 1731

44-45, should be reconsidered since the Applicant elected the species of carbon fiber, as opposed to the species of polyacrylonitrile or pitched based carbon. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6) Claims 36-37, 39-40, 42, 44-45, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bagg (4,016,031) in view of Fukuta (4,229,397).

Claims 36-37, 44-45: Bagg discloses a mat made of carbon fibers wherein the carbon fibers are unidirectional in at least 90 percent alignment (col. 1, lines 50-55, and col. 3, lines 5-50). This reads on the claimed fibers 9 to 1 machine to cross direction ratio, and on the claimed at least 90 percent machine direction orientation of fibers. Bagg fails to disclose a basis weight of the mat. Fukuta discloses a mat made of

Art Unit: 1731

reinforcing fibrous carbon fibers of basis weight from 10 gm/meter square to 1 kg/meter square (col. 1, line 46 to col. 2, line 41, and col. 4, lines 46-50). It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Bagg and Fukuta, because such a combination would provide a mat of a wide range of basis weights in the design of Bagg.

Claim 39: Fukuta discloses thermoplastic components (col. 2, lines 43-68).

Claim 40: Fukuta discloses a plurality of mats (col. 5, lines 22-27).

Claim 42: Fukuta discloses mats of different fibers and different orientations (col. 2, line 29 to col. 8, line 48).

7) Claim 41 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bagg. Bagg discloses a mat made of carbon fibers wherein the carbon fibers are unidirectional in at least 90 percent alignment (col. 1, lines 50-55, and col. 3, lines 5-50).

In the event any differences can be shown for the product of the product-by-process claim 41, as opposed to the product taught by the reference Bagg, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results; see also In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

8) Claim 41 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fukuta. Fukuta discloses a mat made of reinforcing fibrous carbon fibers of basis weight from 10 gm/meter square to 1 kg/meter square (col. 1, line 46 to col. 2, line 41, and col. 4, lines 46-50).

In the event any differences can be shown for the product of the product-by-process claim 41, as opposed to the product taught by the reference Fukuta, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results; see also In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

### ***Response to Amendment***

- 9) Specification cross-reference section update to indicate that the application 09/054771, is now patent US 6,066,235, is accepted.
- 10) Claim 36 objection due to informalities is withdrawn.
- 11) Claims 36-37, 39-40, rejection under 35 U.S.C. 102(b) as being anticipated by Casey, is withdrawn in view of amended claims.
- 12) Claims 41-42, rejection under 35 U.S.C. 103(a) as being unpatentable over Casey in view of Bagg (GB 1,389, 539) and Weeks (5,409,573), is withdrawn in view of amended claims.

### ***Conclusion***

- 13) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Halpern whose telephone number is 703-305-4522. The examiner can normally be reached on Mon-Fri, (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703-308-1164. The fax phone numbers

Art Unit: 1731

for the organization where this application or proceeding is assigned are 703-308-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Mark Halpern  
Patent Examiner  
Art Unit 1731

January 28, 2003